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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,142	06/30/2003	Ashoke Ravi	P-5783-US	8192

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EXAMINER	
YUN, EUGENE	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/608,142	RAVI ET AL.	
	Examiner	Art Unit	
	EUGENE YUN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9-11,13-17,19-21 and 23-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9-11,13-17,19-21 and 23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 11, and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Komori et al. (US 5,481,227).

Referring to Claim 1, Komori teaches an apparatus comprising a tunable oscillator having a tuned output frequency (see col. 2, lines 24-32) comprising:

A first oscillation path (see first oscillating loop in fig. 1) having a first amplifier 3 (fig. 1) and a first oscillation tank with a first free running frequency (see f1 in fig. 1);

A second oscillation path (see second oscillating loop in fig. 1) having a second amplifier 9 (fig. 1) and a second oscillation tank with a second free running frequency (see f2 in fig. 1), the second oscillation path being connected in parallel to the first oscillation path (see col. 3, lines 37-45 and fig. 1 where it is shown that the first and second oscillating loops are in parallel);

Wherein a tuning voltage is to tune the gains of the first amplifier and the second amplifier (see col. 2, lines 12-23), and wherein the output frequency is tunable between the first free running frequency and the second free running frequency (see col. 4, lines 40-52).

Referring to Claim 21, Komori teaches a method comprising:

Tuning an output frequency of a tunable oscillator to a value between a first free-running frequency of a first oscillation tank and a second free-running frequency of a second oscillation tank (see col. 4, lines 40-52);

Wherein tuning comprises:

Providing a tuning voltage at a node connected between first and second oscillation paths of said oscillator (see col. 2, lines 12-23), wherein the first oscillation path is parallel to the second path (see col. 3, lines 37-45 and fig. 1 where it is shown that the first and second oscillating loops are in parallel), wherein the first oscillation path (see first oscillating loop in fig. 1) includes a first amplifier 3 (fig. 1) and said first oscillation tank (see f1 in fig. 1), and wherein the second oscillation path (see second oscillation path in fig. 1) includes a second amplifier 9 (fig. 1) and said oscillation tank (see f2 in fig. 1);

And tuning the gains of the first amplifier and the second amplifier by the tuning voltage (see col. 2, lines 12-23).

Referring to Claim 11, Komori teaches a wireless communication device comprising:

A dipole antenna to send and receive wireless communication signals (see col. 6, lines 5-8 noting that the use of FM band signals usually involves the use of a dipole antenna); and

a tunable oscillator having a tuned output frequency (see col. 2, lines 24-32) comprising:

A first oscillation path (see first oscillating loop in fig. 1) having a first amplifier 3 (fig. 1) and a first oscillation tank with a first free running frequency (see f1 in fig. 1);

A second oscillation path (see second oscillating loop in fig. 1) having a second amplifier 9 (fig. 1) and a second oscillation tank with a second free running frequency (see f2 in fig. 1), the second oscillation path being connected in parallel to the first oscillation path (see col. 3, lines 37-45 and fig. 1 where it is shown that the first and second oscillating loops are in parallel);

Wherein a tuning voltage is to tune the gains of the first amplifier and the second amplifier (see col. 2, lines 12-23), and wherein the output frequency is tunable between the first free running frequency and the second free running frequency (see col. 4, lines 40-52).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-7, 9, 10, 13-17, 19, 20, and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori in view of Igarashi et al. (US 5,950,143).

Referring to Claims 3, 13, and 23, Komori does not teach an adder to add first and second signal components passing through said first and second paths. Igarashi

also teaches an adder to add first and second signal components passing through said first and second paths (see col. 12, lines 21-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Igarashi to the device of Komori in order to better reduce interference between oscillation signals.

Referring to Claims 4, 14, and 24, Komori also teaches the first and second amplifiers having gains and the gains of the amplifiers as complimentary (see col. 5, lines 27-28).

Referring to Claims 5, 15, and 25, Igarashi also teaches the sum of the gains of the first and second amplifiers as substantially constant (see col. 12, lines 21-27).

Referring to Claims 6, 16, and 26, Igarashi also teaches the sum of the gains of the first and second amplifiers as substantially equal to one (see col. 1, lines 21-27).

Referring to Claims 7, 17, and 27, Igarashi also teaches the tunable oscillator able to control the relative values of the gains of the first and second amplifiers (see col. 12, lines 28-37).

Referring to Claims 9 and 19, Igarashi also teaches controlling first and second voltages applied to said first and second amplifiers, respectively (see col. 10, lines 22-41).

Referring to Claims 10 and 20, Igarashi also teaches the first path comprising a first transconductor and the second path comprising a second transconductor (see col. 9, line 66 to col. 10, line 14).

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3-7, 9-11, 13-17, 19-21, and 23-27 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's arguments filed 2/26/2008 have been fully considered but they are not persuasive.

The applicant argues that the Komori reference does not teach a tuning voltage to tune the gains of a first amplifier and second amplifier, further arguing that the Komori reference teaches two different voltages tuning the two amplifiers. The examiner would like to reiterate that neither the claims nor the specification state that the first and second amplifier are tuned by a "single" or "same" tuning voltage. Therefore, it should not matter whether or not the Komori reference teaches the two amplifiers tuned by two different voltages. The previous office action stated that the specification does not support the teaching of a single tuning voltage tuning the two amplifiers. Therefore, since neither the claims nor the specification states anything about the first and second amplifier are tuned by a "single" or "same" tuning voltage, The Komori reference teaches a tuning voltage to tune the gains of a first amplifier and second amplifier.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENE YUN whose telephone number is (571)272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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